

Top and sides of head blackish-brown with narrow and indistinct grey supercilium; mantle very dark bronze-brown with dark olive-green feather tips; back, scapulars and rump very dark green with blackish-brown feather bases; upper tail-coverts very dark bronze-brown with blackish-brown feather bases; rectrices blackish-brown with slightly lighter tips to outer feathers; primaries and primary-coverts blackish-brown with lighter fringes to outer webs of primaries; secondaries blackish-brown with dark olive-green wash on outer webs of inner feathers; chin buff; throat and breast dull grey with broad brown feather tips; belly and flanks dull brown with grey feather bases; under tail-coverts dark grey; under wing-coverts dark brown.

The marked difference in coloration from females of *G. jobiensis* might suggest that *chalconota* should be regarded as a distinct species. However, Amadon (1943) found that adult females of the closely related *G. stairii* are dimorphic: one morph resembling the adult male plumage while the other is generally drab and brownish. A similar situation could exist with *chalconota*, or the Liverpool female specimen could represent an aberrant individual or an undescribed subspecies. Additional specimens are needed for proper assessment of the status of the San Christoval population and of *chalconota*, but recent field workers in the region have not seen the species (Galbraith & Galbraith 1962).

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The birds of Alacran Reef, Gulf of Mexico

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This paper presents observations made during a three-week visit to Arrecife Alacran in the Gulf of Mexico, from the end of August into September 1975, and brings together all other published information on the birds of the reef.

Alacran Reef, $22^{\circ} 30' N$, $89^{\circ} 42' W$, lies *c.* 137 km north of the port of Progreso, Yucatan, Mexico, and *c.* 805 km south of the coast of Louisiana, and its islands are among the few offshore islands in the Gulf of Mexico that lie more than *c.* 40 km from the coast (Fig. 1). The only others are the well-known Dry Tortugas in the eastern part of the Gulf, and those to the west



Fig. 1. Off-shore islands of the Gulf of Mexico. (Drawn by Robin Prytherch)

that share the Campeche Bank with Alacran, namely, Cayo Arenas, Arrecifes Triangulos (Oeste, Este and Sur) and Cayos Arcas. Cayo Neuvo, $21^{\circ} 50' N$, $92^{\circ} 04' W$, listed by Lowery & Newman (1954) as an offshore island that might provide nesting sites for birds, is not included by Paynter (1953) in his list of Campeche Bank islands. It appears on the hydrographic chart (Barnett 1848) as a bank rather than an island, but it is clear from the pilot (Anon 1941) that there is one cay and two 'above-water sandbanks'. So far as I can ascertain no ornithologist has visited this island. All the Campeche Bank islands lie between 128 km and 160 km offshore, while the Dry Tortugas are 109 km from the nearest land. The Alacran group is the most remote from the mainland and from other islands.

The Alacran Reef is of classical half-moon shape (Fig. 2), *c.* 26 km along its longest axis and *c.* 14 km wide, with its rounded side facing the prevailing northeasterly trade winds. Along the open southwest side of the reef the navigational chart shows 5 islands, each a bank of coral sand, whose outlines vary seasonally with storms and changing wind directions—for example Fosberg (1962) reported that Desterrada had been cut into two islets by a

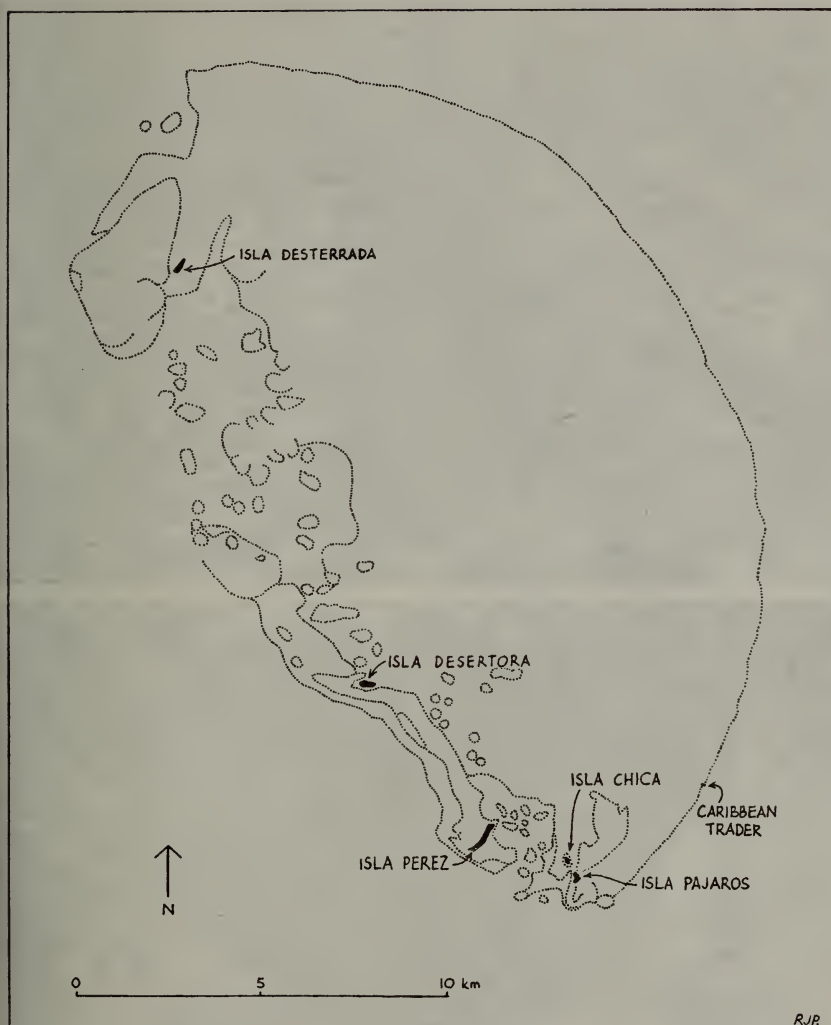


Fig. 2. The Alacran Reef. (Drawn by Robin Prytherch from a hydrographical chart)

storm—so that the dimensions that follow must thus be taken as very approximate. In the north is Isla Desterrada (0.9 km long, 18 ha.) also called Utowane, which I did not visit. In the south is Isla Desertora (0.25 km long, 2 ha.), also known as Allison, and locally as Muertos; a pair of islands Chica (0.18 km long, 1 ha.) and Pajaros (0.2 km long, 1.3 ha.), the latter known locally as Blanca, and Isla Perez (0.95 km long, 13 ha.).

I was resident on Isla Perez from 0900 on 30 August to 1100 hours on 21 September 1975, and I landed on Desertora on 1 and 8 September, and on Chica and Pajaros on 2 September. My visit was not strictly ornithological



Fig. 3 (above). Perez Island, Alacran Reef, looking NNW from the balcony of the lighthouse.

Fig. 4 (below). Immature Purple Gallinule *Porphyryula martinica* consuming the fruit of a Prickly Pear (*Opuntia* sp.), Perez Island, Alacran Reef, 20 September 1975.

and my opportunity for making observations varied considerably from day to day. In particular I was not able to make and relate daily observations of migrants with the weather.

Perez is the only inhabited island, having a population of two lighthouse keepers and two members of the Mexican Marines. It is the largest of the southern islands and the most vegetated of the four I visited, having one species of conifer (the Australian pine *Casuarina* sp.), 2 of ornamental deciduous trees, 2 species of mangrove, and one species (the prickly pear *Opuntia* sp.) of cactus. The island also boasts large areas of low shrubs, and a number of sand-loving plants, e.g. sea lavender *Limonium* sp. The pines are said to have been planted 60 years ago, the tallest being at least 20 m (see Fig. 3). The other 3 southern Alacran islands have an impoverished flora, no plant growing taller than c. 1 m.

The vegetation of the 4 southerly islands was identified and mapped in great detail in 1899 by Millspaugh (1916) but profound changes have taken place according to Fosberg (1962), who gives brief descriptions of the terrestrial flora and describes the climate and physiography.

The only vertebrates seen on Perez besides wild birds and man were two domestic dogs and a small species of lizard. No introduced cats (*Felis* sp.) were present, and I neither saw nor was told of any rats (*Rattus* sp.), though Dampier (1699) reported 'large rats, which are in great bounty'.

There are very few published references to the birds of Alacran. Dampier (1699) spent 2-3 days among the Alacran islands in the late summer of 1675, exactly 300 years before my own visit, and mentions some birds, as also do Smith (1838) and Marion (1884). In mapping the vegetation of 4 of the islands in 1899 Millspaugh (1916) noted nesting seabirds. Kennedy (1917) landed on Pajaros and Chica on 20 May 1912 and wrote specifically about birds, as did Paynter (1953, 1955), who visited the 5 Alacran islands 1-3 September 1952. Siebenaler (1954 and in Paynter 1955) visited Isla Desterrada on 6 October 1952. An expedition in July 1959 (Kornicker *et al.* 1959) listed the breeding birds of the islands, as well as the marine invertebrates, and produced the best available map (see also Kornicker & Boyd 1962). A visit in July 1961 (Fosberg 1962), was mainly to study the physiography and botany. Summarising the scientific work done at Alacran 1955-1961, Anon (1963) describes Alacran as one of the world's best known atolls. Such, however, is not true of its birds.

SYSTEMATIC LIST

All my observations refer to Isla Perez unless otherwise specified.

BLUE-FACED BOOBY *Sula dactylatra*. About 2,000 present on Isla Desertora, 1 and 8 Sep., adults outnumbering young by 3-4:1. All but a dozen young birds could fly; only one nestling was still completely covered in down. A few fully-feathered young were seen being fed fish by adults. On Pajaros I found 21 adults and one full-grown but flightless young. Dampier (1699) reported boobies in great abundance in 1675 but 'only on some of the northernmost' of the '5 or 6 low sandy islets'. He was probably referring to the Blue-faced Booby, as may have been Smith (1838) who said 'All the cays swarm with boobies', and Marion (1884) who found boobies nesting on Isla Pajaros. Millspaugh (1916) photographed this species on its nest at Alacran in March 1899; he found the birds nesting on Desertora as well, and implies that they were also breeding on Pajaros and Chica, where Kennedy (1917) certainly found them nesting in May 1912. Kennedy also records 2 'great downy youngsters on Pajaros, and some fifty pairs with very small young, or eggs' on Chica. Between 1-3 Sep. 1952 Paynter (1955) found 200 individuals on Pajaros, where nesting had already been completed.

BROWN BOOBY *Sula leucogaster*. Single immatures, 12 and 17 Sep. 4 adults and 2 young seen resting on the wreck of the ship 'Caribbean Trader' 13 Sep. According to the lighthouse keeper, thousands nest on Isla Desterrada. Paynter (1955) recorded c.500 resting on an islet off Isla Pajaros, and 300 on Isla Desterrada in early Sep. 1952 and was told by lighthouse keepers that it nested on both these islands. Siebenaler (1954) recorded it near Desterrada, 5 Oct. 1952. Kornicker *et al.* (1959) list it without detail as one of 7 seabirds nesting at Alacran.

MAGNIFICENT FRIGATEBIRD *Fregata magnificens*. Seen daily in varying numbers, maximum 500 at Isla Desertora, 1 Sep., where a large but partly downy nestling was found on 8 Sep., near 48 empty nests in low shrubbery. About 100 regularly nested on the wreck of the 'Caribbean Trader'. According to the lighthouse keeper it nests also on Isla Desterrada. Dampier (1699) found 'Men of War Birds' nesting at Alacran, colourfully describing their piratical behaviour. Smith (1838) mentions the species in passing and Millsbaugh (1916) put up a cloud of frigates from Desertora and found their nests there. Kennedy (1917) flushed several from Pajaros but did not think they were nesting. In early Sep. 1952 Paynter (1955) found on Isla Desterrada many occupied nests but few eggs; and a month later J. B. Siebenaler (*in* Paynter 1955) estimated 2,500 nests with eggs there.

GREAT BLUE HERON *Ardea herodias*. An immature near Isla Chica on 6 Sep.

GREEN HERON *Butorides striatus*. Singles on 5, 11, 12, 17 and 18 Sep., 5 on 6th, 40 on 14th and 16 on 15 Sep. Paynter (1953) saw c. 10 between 1 and 3 Sep., 1952.

CATTLE EGRET *Bubulcus ibis*. One adult on 31 Aug., one young bird on 1 Sep., one adult and 2 young on 2nd, one young on 7th, 8 adults on 16th, one adult on 18th and 2 adults on 19 Sep. Paynter (1955) knew of no records for Yucatan.

BLACK-CROWNED NIGHT HERON *Nycticorax nycticorax*. One adult, 15 Sep. Not recorded in Yucatan by Paynter (1955).

YELLOW-CROWNED NIGHT HERON *Nyctanassa violacea*. A single immature, almost certainly the same individual, was seen 1, 10, 16, 17, 18 and 19 Sep. Paynter (1953) saw one between 1 and 3 Sep., 1952.

LEAST BITTERN *Ixobrychus exilis*. One female or immature found on the ground in convulsions, 5 Sep., died within 10 minutes: there was no external sign of injury except a tiny ooze of blood from one nostril. Weight 55.0 gm. Three males given by Palmer (1962) weighed 45.0-85.3 gm. Paynter (1955) knew of only one previous record for Yucatan.

SHARP-SHINNED HAWK *Accipiter striatus*. Siebenaler (1954) saw one near Desterrada on 5 Oct. 1952.

PURPLE GALLINULE *Porphyryla martinica*. An immature was rummaging in the lighthouse keeper's open air kitchen on 18 Sep. Very tame, it took scraps of food from a bowl, even stepped into a basin of water for a bath. It was still present on 19 and 20 Sep. It persistently fed on the ripe red fruit of a prickly pear cactus (Fig. 4).

BLACK-BELLIED PLOVER *Pluvialis squatarola*. Totals for the 4 islands were: in Aug., 3 on 31st, in Sep., one on 1st, 6 on 2nd, one on 8th, 2 on 10th, 3 on 16th, 5 on 18th, one on 19th and 3 on 20th. Paynter (1953) recorded 5 between 1 and 3 Sep., 1952.

RUDDY TURNSTONE *Arenaria interpres*. Up to 25 daily on Isla Perez, often feeding inland among bushes or in areas of dry coral sand, and in small numbers on the other islands. Paynter (1953) saw about 50 between 1 and 3 Sep. 1952, and Siebenaler (1954) one near Desterrada on 5 Oct. 1952.

COMMON SNIFE *Gallinago gallinago*. Six flushed from among bushes, 20 Sep.

SPOTTED SANDPIPER *Actitis macularia*. One, 31 Aug.

WILLET *Catoptrophorus semipalmatus*. One on 1 Sep., 2 next day and one on 20 Sep.

GREATER YELLOWLEGS *Tringa melanoleuca*. Two seen and heard on 2 Sep., one on 8 Sep.

LESSER YELLOWLEGS *Tringa flavipes*. One on 17, 18, 19 and 20 Sep.

Calidris sp. Two black-legged sandpipers on 31 Aug., 2 on 17 Sep. and one on 20 Sep. were almost certainly Semi-palmated Sandpipers *C. pusilla*.

SANDERLING *Calidris alba*. Up to 10 daily on Isla Perez and also seen on the other islands. Paynter (1953) saw 5 between 1 and 3 Sep. 1952.

WHITE-RUMPED SANDPIPER *Calidris fuscicollis*. Kennedy (1917) shot 2 on Isla Pajaros 20 May 1912, misidentifying them as Baird's Sandpiper *Calidris bairdii* (Lowery & Newman 1954).

LEAST SANDPIPER *Calidris minutilla*. Seven on 31 Aug., 11 on 1 Sep., 8 on 16th, 11 on 17th, 4 on 18th and 20 Sep.

SHORT-BILLED DOWITCHER *Limnodromus griseus*. Six on 31 Aug., 9 on 1 Sep., 5 on 2nd, 9 on 10th and 16th, 10 on 17th, 5 on 18th, 2 on 19th and 11 on 20 Sep.

BLACK-NECKED STILT *Himantopus mexicanus*. Fifteen on 1 Sep. and 7 on 18 Sep.

LAUGHING GULL *Larus atricilla*. I saw no evidence of breeding. Up to c. 100 daily, often in attendance near fishing vessels. A small proportion were birds of the year, e.g. 14 out of 94 on 20 Sep. Kennedy (1917) found 4 nests on Pajaros. Paynter (1955) was told by the lighthouse keepers that Laughing Gulls were fairly common nesters throughout the reef.

SOOTY TERN *Sterna fuscata*. Between 12 and 20 daily up to 13 Sep.; thereafter only 1-2 daily. According to the lighthouse keeper, it nests by the thousand. I saw only 2 young birds: one on 1 Sep. barely able to fly, and another with a broken wing but being attended by an anxious adult, 13 Sep. Of the early visitors only Dampier (1699) makes specific reference to terns—presumably his 'Egg-birds' breeding at Alacran meant terns. Kennedy (1917) found a great colony of Sooty Terns nesting on Pajaros. In early Sep. 1952 Paynter (1955) saw only 5 at Alacran, on Isla Perez. He was told that many thousands breed throughout the reef. The eggs of Sooty and Noddy Terns are exported in thousands, probably tens of thousands, each year, being sold in 1975 at the rate of 100 pesos for 500 eggs. The claim is made that no eggs are taken after Easter each year.

ROYAL TERN *Sterna maxima*. Between 30 and 110 daily; I saw no evidence of breeding. Paynter (1955) was told by the lighthouse keepers that they bred May-June. Siebenaler (1954) saw some near Desterrada, 5 Oct. 1952.

SANDWICH TERN *Sterna sandvicensis*. Up to about 20 birds most days up to 17 Sep. I saw no evidence of breeding. Kennedy (1917) found a colony on Pajaros, and Paynter (1955) saw several hundred early Sep. 1952 and was told that the main colony of several hundred birds was on Isla Desterrada.

BLACK TERN *Cblidion niger*. Three near Isla Desertora, 8 Sep. Paynter (1955) saw c. 50 between 1 and 3 Sep. 1952.

NODDY TERN *Anous stolidus*. About 2,000 adults and young of the year, were present when I arrived, most still occupying nests in shrubs and trees; but they were only a fraction of the total of pairs which the lighthouse keeper said nest on the island. Towards the end of my stay the island would be deserted during the day, and by 21 Sep. numbers were down to several hundred birds. The young birds appeared fully grown and were free flying, but persistently begged from their parents, though no fishing or feeding behaviour was observed in daylight. They were fed at night, judging from fish remains occasionally found in the mornings, as late as 10 Sep. Daytime begging by young terns was much less evident by 21 Sep. Paynter (1955) found a few in early Sep. 1952 on Isla Perez by day, but at night-fall hundreds roosted. He estimated many hundreds of old nests and concluded that well over 1,000 birds must breed on the island. See also under Sooty Tern for notes on the commercial exploitation of eggs.

YELLOW-BILLED CUCKOO *Coccyzus americanus*. Paynter (1953) saw one between 1 and 3 Sep., 1952.

BLACK SKIMMER *Rynchops nigra*. Two together, 18 Sep.

HUMMING-BIRD Trochilidae sp. One briefly seen and heard, 16 Sep.

BELTED KINGFISHER *Megaceryle alcyon*. One on 5 Sep., 2 on 14th and one on 15 Sep. Paynter (1953) saw one between 1 and 3 Sep. 1952.

Unidentified larger small passerines. Birds noticeably larger than wood-warblers were seen as follows: one on 30 Aug., 2, 7, 17 Sep., 2 on 16 Sep.

EASTERN KINGBIRD *Tyrannus tyrannus*. Four on 6 Sep., 2 on 10th, 3 on 14th, singles on 15, 16, 19 Sep., 3 on 18th and 6 on 20 Sep. Paynter (1953) saw c. 15 between 1 and 3 Sep., 1952.

TYRANNIDAE sp. A bird with grey head, white breast, and lemon yellow belly seen on 2 Sep. was almost certainly of the genus *Tyrannus*. Another, with two noticeable wing bars, sulphur yellow underparts and a tail of warm brown, fleetingly observed on 19 Sep. was almost certainly a Great Crested Flycatcher *Myiarchus crinitus*.

EASTERN PHOEBE *Sayornis phoebe*. Singles on 6, 8, 16, 18, 20 and 21 Sep., and 2 on 19 Sep. A bird with a drooping wing caught flies round the lighthouse keeper's open-air kitchen 9-12 Sep. Only one previous record from Yucatan (Paynter 1955).

EASTERN WOOD PEWEE *Contopus virens*. One on 19 Sep.

BANK SWALLOW *Riparia riparia*. One on 31 Aug., and in Sep. singles on 1, 6, 12, 15, 16 and 17 Sep., 2 on 4 Sep. Paynter (1953) saw 8 between 1 and 3 Sep., 1952.

BARN SWALLOW *Hirundo rustica*. Numbers were not easy to estimate but 15-50 present daily. All were birds of the year. A few were seen over the other 3 islands and over 'Caribbean Trader', and occasionally over the open sea. Two dead birds were found 31 Aug. and 4 on 2 Sep. One that died in the hand weighed 12 gm. The swallows roosted on the buildings of the island. Paynter (1953) saw c. 200 between 1 and 3 Sep., 1952.

CLIFF SWALLOW *Petrochelidon pyrrhonota*. In September, one on 1 Sep., 2 on 4th, 3 on 6th, and 2 on 17 Sep. One of those seen on 6 Sep. died in the hand and weighed 12 gm. Only 2 previous records from Yucatan (Paynter 1955).

PURPLE MARTIN *Progne subis*. Two on 31 Aug., and one on 2nd, 8 on 4th and 5 on 14 Sep. Paynter (1953) saw 5 between 1 and 3 Sep., 1952.

TURDIDAE sp. A thrush on 18, 19 Sep., well seen from the rear but not the front, was either a *Hylocichla* or a *Catharus*.

RED-EYED VIREO *Vireo olivaceus*. One 3 Sep., and another 19 Sep. Paynter (1953) saw one between 1 and 3 Sep., 1952.

Unidentified medium small passerines. Birds about the size of wood-warblers, were seen as follows: one on 30 and 31 Aug., and in Sep., 5 on 1st, 3 on 2nd, one on 4th, 2 on 6th, one on 10th, one on 13th, one on 14th, 2 on 15th, one on 16th, 3 on 17th, 2 on 18th, one on 19th and 2 on 20th.

BLACK-AND-WHITE WARBLER *Mniotilta varia*. A male on 9 Sep., and individuals in female-type plumage were seen as follows: one on 12, 15, 16, 19 and 20 Sep., and 2 on 14 Sep.

GOLDEN-WINGED WARBLER *Vermivora chrysoptera*. Paynter (1953) saw one between 1 and 3 Sep., 1952.

PROTHONOTARY WARBLER *Protonotaria citrea*. One on 15 Sep.

NORTHERN PARULA *Parula americana*. Three on 31 Aug. and one on 1 Sep. Paynter (1953) saw one between 1 and 3 Sep., 1952.

YELLOW WARBLER *Dendroica petechia*. Single males on 9, 10 and 13 Sep.

BLACK-THROATED BLUE WARBLER *Dendroica caerulescens*. An adult male on 18, 19 Sep. Only 2 previous records (4 individuals) from Yucatan (Paynter 1955).

CERULEAN WARBLER *Dendroica cerulea*. Paynter (1953) saw 2 between 1 and 3 Sep., 1952.

PINE WARBLER *Dendroica palmarum*. Siebenaler saw one near Desterrada on 5 Oct. 1952.

OVENBIRD *Seiurus aurocapillus*. One on 2 Sep., 2 on 14th and one on 17, 18 and 19 Sep. Paynter (1953) saw c. 5 between 1 and 3 Sep. 1952.

NORTHERN WATERTHRUSH *Seiurus noveboracensis*. One on 2 Sep., 2 on 14th, 1 on 17, 18 and 19 Sep.

KENTUCKY WARBLER *Oporornis formosus*. Two on 4 Sep., and one next day.

HOODED WARBLER *Wilsonia citrina*. A male on 16 Sep. and a different, apparently moulting male on 18, 19 Sep. Paynter (1953) saw c. 100 between 1 and 3 Sep., 1952.

WILSON'S WARBLER *Wilsonia pusilla*. One first seen on the evening of 1 Sep. was found dead next morning, weighing 8.0 gm. One on 4 Sep., and an intensely yellow individual on 9, 10 and 12 Sep. Two on 14, 15, 16, 18 Sep; one of those present on 16th and 18th had a well-marked black cap. Not recorded by Paynter (1955) for Yucatan.

AMERICAN REDSTART *Setophaga ruticilla*. Singles, none of them adult males, on 5, 14, 15, 16 and 18 Sep. Paynter (1953) saw c. 5 between 1 and 3 Sep., 1952.

Icterus or *Piranga* spp. Passerines, almost certainly of one or other of these genera, were seen as follows: one on 31 Aug., 1, 9 and 19 Sep., 2 on 6 Sep., and 3 on 12 Sep.

BOBOLINK *Dolichonyx oryzivorus*. Three on 10, 12, and 14 Sep., one on 16 and 20 Sep.

NORTHERN ORIOLE *Icterus galbula*. Two *I. g. galbula* on 14 Sep., one a blackish-headed female; 3 on 16 Sep., one an adult male.

LARK SPARROW *Chondestes grammacus*. Singles on 11, 15, 18, 19 and 20 Sep. Only one previous record from Yucatan (Paynter 1955).

Finch-like passerines. Two with heavy bills seen 19 Sep. and one on 20th, were neither Bobolinks nor Lark Sparrows.

DISCUSSION

A number of the small passerines I saw showed signs of weakness—half closed eyes and drooping wings—and a Red-eyed Vireo, for example, can be seen in film (Boswall & Fisher 1976) in this condition. From time to time a number of tired Barn Swallows allowed the observer closely to approach their perches and on 3 occasions, in search of fresh water, perched on the edge of a pail, within a metre or 2 of a human. Occasionally swallows were seen drinking while on the wing at the small brackish lagoon at the south end of the island. Rain, in varying amounts, fell at least every 3–4 days, but it evaporated fast and on days of no precipitation the only fresh water available would have been that derived from insect prey. On 20 Sep. an Eastern Phoebe surprisingly flew from a coastal bush, splashed into the sea, either to drink or bathe, and returned to its perch. A young Purple Gallinule took in moisture with the damp food put out for it, and may also have drunk while bathing.

One Least Bittern, 6 Barn Swallows, one Cliff Swallow and one Wilson's Warbler were found in a dead or dying condition.

Midges appeared to be very common on the island, as were house flies (*Musca* sp.) near the human habitation. More than one Eastern Phoebe appeared to make a satisfactory living near the lighthouse keeper's kitchen, feeding, no doubt, on insects.

The abundance and variety of other insects observed were such as strongly to suggest migratory movement. Seven or 8 species of Lepidoptera were noted, as were 4–5 species of dragonflies (Odonata), one of lacewing (probably of the Order Planipennia), at least one species of grasshopper (Acrididae), and a number of other smaller fly-like unidentified insects. A Black-and-White Warbler was seen immobilising an off-white moth, but the extent to which migrant birds generally benefit from migrant insects is a matter for speculation.

In their review of the birds of the Gulf of Mexico, Lowery & Newman (1954) used 3 species-categories: off-shore birds, birds of the coast and land birds over the open Gulf.

At Alacran 4 off-shore species have so far been observed and they all breed there, namely the Brown Booby, Blue-faced Booby, Sooty Tern and Noddy Tern. Four coastal species also breed at Alacran: the Magnificent Frigatebird, Laughing Gull, Royal Tern and Sandwich Tern. Non-breeding coastal species that have occurred at Alacran on migration or as a result of post-nesting dispersal number about 17 species. No land birds are known to have bred at Alacran, but land birds seen on migration total about 36 species. The apparent absence of nesting land birds is probably attributable not only to the island's very small area (Hamilton *et al.* 1964), but also to the paucity of habitats, absence of a reliable water supply and distance from the mainland. The nearest mainland is Yucatan, a peninsula, and thus offering fewer species as colonists than a mass of mainland (MacArthur & Wilson 1967: 115–116).

In regard to migrant land birds, taking the Gulf as a whole, Lowery & Newman (1954), summarising all records up to autumn 1951, had autumn records of only 13 land bird species over the waters of the Gulf at distances of a mile or more from the nearest coast. None was from islands. Paynter's 1952 early autumn cruise round the Campeche Bank added as many as 23

species, Siebenaler (1954) added 11, and my own observations from Isla Perez add a further 9 species. Thus 56 species of land bird have now been seen in autumn either over the open Gulf or on offshore Gulf islands, though in spring 61 species have been seen (Lowery & Newman 1954). Paynter (1953) thought that his observations on the Campeche Bank pointed towards regular autumnal trans-Gulf migration being normal and G. H. Lowery tells me he has many 'data on the arrival in Yucatan in fall of large flights from the open Gulf'. In any case southward migration across the Gulf was never disputed as strongly as spring movements northward (Williams 1945), and it is now clear that nearly all migrants are capable of trans-Gulf migration at either season, though the detailed pattern has yet to be clarified.

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Postscript:

After the above paper had been typeset, Byrd (*in Sprunt et al.* 1978. Nat. Audubon Soc. N.Y.) reported a juvenile Cattle Egret *Bubulcus ibis*, colour ringed in Virginia and recovered at sea in the Gulf of Mexico c. 100 km south of the coast of Louisiana in the direction of Yucatan. This observation and my own at Alacran appear to show that at least some Cattle Egrets (a species absent from much of the United States during winter) make direct trans-Gulf flights to Mexico, this being one of 3 possible routes discussed by Byrd.

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A new race of *Pitta oatesi* from Peninsular Malaysia by Ben King

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In April 1977, I spent six days on Fraser's Hill in the mountains of western Pahang trying to find a pitta that had been reported intermittently over a period of 29 years, but had never been identified.

The first records of a pitta, apparently resident in the Malaysian mountains, are those of Bromley (1952) who saw and heard birds which he thought were Giant Pittas *Pitta caerulea* on Fraser's Hill in August 1948, and heard similar calls at Maxwell's Hill, Perak state, on 29 April 1950. A further sighting, also attributed to *caerulea*, was reported from Fraser's Hill by Allen (1959). At the same locality on 31 May 1969, Graham Madge, David Wells and Ken Scriven tape-recorded calls similar to that described by Bromley. No bird was seen but on the following day near the same spot, Wells saw a brown pitta with green back and shining blue rump. Subsequently Madge saw a similar bird.

I started my search in late afternoon on 3 April by playing a copy of the tape made in 1969 by Ken Scriven. One bird replied. Next morning I walked a trail for about one km and got responses to the tape from 3 different birds. I got only brief shadowy glimpses of 2 birds and saw even less of them on the next 2 days. Finally on the morning of 7 April, I flushed one from a perch about 3 m up in a palm tree. The perch proved to be the pitta's nest. I stayed nearby and recorded various notes of the bird but did not get a look at it on the ground.

I notified Bernard Bond and Julian Perry who arrived that evening. At dawn we set a mist net across the bird's flight route from the nest. Later we flushed the bird into the net and collected the nest with its 2 eggs. The bird proved to be the Rusty-naped Pitta *Pitta oatesi*.

Pitta oatesi is a large pitta (total length 25 cm) found in Burma, Thailand and Indochina. The head and underparts are brownish with a black line behind the eye. The mantle to tail is dull greenish, sometimes with a bluish tinge on the rump. The species is currently divided into 3 subspecies (Mayr, *in manuscript*): *P. o. oatesi* (Hume 1873), Burma (including Tenasserim), northwestern Thailand and northern Laos; *P. o. castaneiceps* (Delacour & Jabouille 1930), south Yunnan and Vietnam; *P. o. bolovenensis* (Delacour 1932), Bolovens Plateau of southern Laos. I examined 46 specimens from the collections of the American Museum of Natural History and the United States National Museum: 25 of nominate *oatesi*, 16 of *castaneiceps* and 5 of *bolovenensis*. There is considerable individual variation and some sexual dimorphism which appears not to have been described in the literature. My